

2000 Breeding Season Report

By

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Overview of the season:

The 2000 breeding season marks the fifteenth year of monitoring raptor nests in Pinnacles National Monument. I continued to use the same methods established by Julie Rehtin in 1988 and documented in the 1993 Five Year Summary. The North Chalone nest site was visited on a two to three week interval, rather than a four-week interval established in Julie Rehtin's 1988 protocol. To allow for brevity in this report, study area description and method sections will not be included. Please refer to Rehtin's 1993 five-year summary for this information. We will move directly into the results of this year's monitoring.

Myself, Kelly Ward, conducted the bulk of the monitoring with 657 hours of observation in the field. Volunteers Debbie Huff and Julie Rehtin assisted in the project totaling 78 observation hours totaled. Shelley Buranek and Amy Fesnock of Pinnacle's Resource and Research Management staff also spent a combined total of 66 observation hours in the field. The total combined time in the field was 861 hours. Field observations began 5 January, and ended 16 June. Eight pairs of prairie falcons were observed, with only the Little Pinnacles pair failing. Additionally, there were single prairie falcons observed in two territories: Dry Wall and Scout Peak. The 7 successful nests produced a total of 22 possible fledglings (20 fledglings confirmed).

PRAIRIE FALCON

The 8 pairs occupied 10 territories (North Balconies pair also occupied South Balconies and Tunnel pair occupied Hawkins). All pairs were in territories occupied in previous years. Several territories occupied in previous years, North Wilderness Rock, South Wilderness Rock, Goat Rock, Scout Peak, Frog and Hand and Dry Wall, remained unoccupied this year. We observed single adult prairie falcons in the Scout Peak, South Balconies and Dry Wall territories through the season. Dry Wall was confirmed vacant on 5 May. The Scout Peak prairie falcon was last observed on 4 April. The South Balconies territory also had a single prairie falcon, which was pushed out of South Balconies by the North Balconies pair. The single South Balconies prairie falcon was not seen later than 6 June. Please see Prairie Falcon Nesting Phenology and Success table at end of report for additional information.

Arrival of prairie falcons in their territories began before 5 January. Incubation began as early as March 11th, with the last pair beginning incubation by 7 April. Hatching occurred between 24 April and 12 May. The first successful fledged was on 31 May and fledging within the park was completed by 16 June. This timing of nesting events is consistent with the 1999-breeding season, and is within the ten-year average. Please see Prairie Falcon Nesting Phenology and Success table at end of report for additional information

GOLDEN EAGLE

In all the golden eagle territories in the park, only the Eagle Rock and the Frog Canyon pairs were observed. No nest was located for either pair, though the Frog Canyon pair was seen mating and perching together in the Dry Wall area. The Eucalyptus territory on the West Side of the monument was not observed this breeding season. Members of the Pinnacles staff and myself reported seeing a pair of golden eagles hunting in the Kingman ranch area near the junction of Hwy 25 and Hwy 146 on several occasions. The Northeast Sec. 15 and South Chalone nests were checked late in the breeding season, April 20. Both nests were empty, and no adults were observed in the area at this time. The only juveniles observed were seen in the beginning of the season, and were not again observed.

RED-TAILED HAWK

The Western Front red-tail hawk pair was again in their territory though their nest was confirmed empty on April 7. No redtails were seen in this territory after April. A pair of redtails was observed in the Machete and Citadel area on several occasions, but no

nest was located. The Cemetery Gates nest in lower Condor Gulch was checked but was empty. The nest on the North side of North Chalone was not checked directly. Though there was never any noted activity from redtails in the area.

OWLS

Semi-nightly owl surveys were completed throughout the season. Often these surveys consisted of random stops along major trails on the hike back from raptor monitoring. These observations were noted in the index and field notes. Species of owls identified by sight or sound included, the great horned, western screech, northern pigmy and the saw whet owls. On two separate evenings a formal survey was conducted along the Bear Gulch trail and the South Wilderness trail. No nest sites were located.

A concentration of western screech owls along the Bear Gulch Trail, ranging from the Bear Gulch caves to bridge #3, was observed on the evening of March 20. Males were observed hooting, without solicitation, apparently responding to other males hooting within adjacent territories. The observations were conducted by making approximate 0.25 mile survey stops for five minutes a stop. The males, assumed to be hooting within their territories, were heard at every stop of approximately 0.25 mile apart. At each stop the faint hooting of the previously noted male western screech owl could be heard, while listening to the newly noted owl. This being said, I assumed that there are no territorial male owls in between the two actively hooting males. Drawing a conclusion that this would appear to be a very healthy population based on concentration.

The South Wilderness trail was surveyed for owls on the evening of April 23. Stops were made at 0.3 miles from the entrance station, down the South Wilderness trail for approximately 1.5 miles. Listening stops were ten minutes in duration, with hoot solicitation starting at 5 minutes if no initial hooting was heard. Vocal solicitations used were northern pigmy owl and western screech owl mimics. On this evening only a saw whet owl's hoot was heard along Hwy 146, although an unidentified small owl was seen flying through trees.

On several occasions northern pigmy owls were heard hooting at twilight in Juniper Canyon and in the Crowley drainage (see index). Great horned owls were observed mating beneath South Balconies on March 12, though a nest was never located. Also great horned owls were heard hooting on multiple occasions in the Chalone Creek picnic area and in the Condor Crags drainage (see index).

ADDITIONAL RAPTOR SIGHTINGS

Red-shouldered hawks were sighted on the premises of Pinnacles Campground Inc. in the oaks surrounding the pool. We believe that the pair nested near the Pinnacles campground, behind the host's residence on Kingman property. Red-shouldered hawks were first seen at the private campground during the Christmas Bird Count in December 1995. Debbie Huff observed Red-shouldered hawks caring nesting material January 20.

There was a minimum of three American kestrel nests in the monument this year. One was in crack on the Knuckles' western most face, one was located on Drywall, and a third was located along the same nest ledge as the prairie falcon's nest on Prescribed Burn. All these nests had confirmed young. Another possible nest was never located, but suspected on Machete. Suspected because of chick begging, adult territorial aggression, and presence of fledglings. Please see "Unusual Raptor Observations" for additional comments regarding kestrels.

There were several single sightings of, seemingly transient, raptors throughout the year. A single Peregrine falcon sighting in Pig Canyon was the only sighting of the year, made on February 5. A ferruginous hawk was seen flying east above Little Pinnacles on April 4. A sub-adult bald eagle was seen flying east above Scout Peak on February 1. A white tailed kite was observed hunting within the eastern boundary of the park above Marion Canyon in May.

UNUSUAL RAPTOR OBSERVATIONS

American kestrel and Prairie Falcons of Prescribed Burn Cliffs

This breeding season an American kestrel pair established their nest on the same face of the Prescribed Burn Cliffs as a pair of prairie falcons. Surprisingly both nests were in the same crack system and successful. These nests produced 4 kestrel young and 5 prairie falcon chicks. The Prescribed Burn Cliffs have been used by a number of bird species for years. This particular nest crack has been used as an eyrie for great horned owls and prairie falcons in the past. This is the first time the American kestrel nest location has been observed, and is in a crack that had not been observed in use by Pinnacles staff.

The nests in question are located in close proximity to each other. I estimated that the nest entrances for both nests were no more than 1.8 meters away from each other. The entire nest ledge connecting the two nests is covered with white wash from years of use. Prairie falcons and American kestrel adults and chicks, had been observed perching on the ledge at the same time.

The American kestrel nest was located after the prairie falcon nest was confirmed as active and with chicks. There were signs of aggression from both bird species on May 11 when an American kestrel mobbed a prairie falcon female. The female prairie falcon then flew to her nest ledge, walked across the ledge connecting the two nests, and into the American kestrel's nest. The white washed ledge of the crack blocked my sight into the nest, until the prairie falcon was again spotted inside it's own nest nearly 15 minutes later. No chick predation was confirmed, and the American kestrels later fledged 4 young.

Flight paths seemed to be established and adhered to, for the most part, by both sets of adults. Prairie falcons often entered their nest from the Southwest while the American kestrels entered from the Northeast. Only the prairie falcon chicks seemed to have difficulty distinguishing their parents from the kestrels. Prairie falcon chicks would begin begging, as American kestrel adults would occasionally fly in front of their nest with a prey delivery for their own chicks.

Three Prairie Falcons at Little Pinnacles

The prairie falcon nest at Little Pinnacles failed this year. The prairie pair attempted to nest in a previously unnoted nest location. Incubation and the presence of chicks was confirmed by behavior of adults, though the nest later failed. The pair then moved to a more exposed nest adjacent to the 1997 nest crack. While at this nest a prey delivery and mating were confirmed. However, no incubation was ever observed, and a second clutch never confirmed.

On April 4, a prey delivery to the prairie falcon's first nest attempt was observed. The male was seen entering the nest leaving only seconds later. The male flew to a perch on East Yak, used often by this pair. The female delayed long enough to eat some prey in the nest and then flew, cropped and with prey in talons, to join the male at his perch. While I had the pair in my scope a third prairie falcon flew westward to the same perch, and landed only inches from the male. Chipping ensued as the third landed, and continued until the first male took flight. Both the original male and the female were confirmed as adults. The third prairie was small like the male, and age was not confirmed. The third prairie falcon was never spotted leaving, and was never observed again.

Willow Springs Slide Salvage Attempt

The Willow Springs Slide prairie falcons had a high mortality year. The pair began the breeding season showing interest in using Canyon North of Willow Springs as their nest site. They finally settled and began incubation at Willow Springs Slide as early as March 22. The pair produced five eggs though only two hatched. Of the two chicks only one made it to fledging age, but was never confirmed fledged. The three unhatched eggs remained in the nest and presented an opportunity for Pinnacles Resource and Research management staff to attempt to salvage the eggs.

On the afternoon of May 12th Amy Fesnock, Neal Labrie and myself hiked up to the Willow Springs Slide nest face. The two chicks in the nest were approximately 10 days old at this time. The female prairie falcon was extremely agitated at our presence above her nest, and dove repeatedly at the three of us. Neal Labrie began a rappel that would leave him at the end of the rope still short of the nest. As he began to ascend the easily disturbed sand stone wall began to crumble. Sending rocks the size of marbles to the size of a fist cascading down the chute in which the nest was located. Neal did a good job of blocking most of the larger rocks however, Amy Fesnock

witnessed several marble sized rocks hit the chicks. Once up at the top of the face the chicks behaved as though uninjured and were moving about the nest.

A second salvage attempt was decided against, because of the risk of injury to the chicks. It is my opinion that this particular nest should never be rappelled into while the nest is occupied. This nest is situated approximately 30 meters down a water chute. The only way to descend into the nest is via this chute. There is no way of descending into the nest without raining down debris on the nest inhabitants. It is unsafe for the birds and not worth the disturbance.

POSSIBLE CHANGE IN METHODOLOGY

We have been monitoring nesting raptors for 15 years. Since 1988, we have been intensively monitoring raptors in the monument on a 7-21 day interval. Observations have traditionally started in January as the prairie falcons are returning from their migration, and have ended with fledging of the young. While nests in the periphery sometimes did not meet this goal, it is the standard we attempted to reach. Recently, a concern that other species of wildlife within the park are being ignored has been expressed. With limited funding and FTEs, it is impossible to hire more people to complete surveys of other wildlife species.

I must first clarify that the Raptor Monitoring Program cannot be disbanded completely. I strongly believe that our population of raptors has remained stable through increased visitorship and climbing activities due primarily to visitor education and the advisory system. When the advisory system was first established, there are significant critiques from the climbing community - primarily targeting our information. The climbing community claimed we didn't know where the birds were and what the breeding status was. The feeling among the climbers was that the Monument staff was closing areas for the sole reason of keeping them out and attempting to eliminate climbing within Pinnacles. If we stop advisories, nests will be disturbed. If we publish advisories without current knowledge, we will lose the trust and confidence we have gained over the past 8 years. Therefore, some amount of raptor monitoring is required.

Possible ways of changing monitoring are:

1. Use the raptor project as a pilot program for university students.

The mountain of data collected by past raptor monitoring seasons is an

excellent form of base line data for related projects to begin. Under-graduate students could gain valuable experience and could be valuable assets to the Pinnacle's staff. Masters students could be encouraged to help design a project in conjunction with major universities and Pinnacles National Monument resource management staff. The threatened status of the prairie falcon could draw attention to the monument if more publications can be printed in popular scientific journals.

2. Start observations later in the year.

For the 1984 and 1987 monitoring seasons, observation started in early April and ran through June. It probably isn't advisable to start in April. Incubation starts in March and advisories are normally updated by early April. If we started observations in early February to early March, this may meet the management needs. Making observations in January may not be critical to the project. However, first year monitors starting in January have plenty of time to get familiar with the park and responsibilities of being a raptor monitor. We generally create the first advisory based upon occupation of territories from the previous three years, so not having information for January will not greatly impact the advisory system. A draw back of a monitoring season starting later in the year is the possibility of a new territory location being disturbed and never established.

3. End observations earlier in the year.

Currently, we try to observe the fledglings. This is not the standard practice, as finding fledging is very time intensive and can be difficult. Most raptor monitoring programs count chicks seen at 90% of fledging age (for Prairie Falcons that is 33-34 days old) as successfully fledged and don't go back to the nests after that. This may allow monitoring to end 1-3 week earlier. However a true fledge number may never be attained without confirming a fledgling out of the nest.

4. Increasing the number of college enrolled volunteers in the program.

We have had 1 volunteer each season for the past few years. These volunteers are usually Pinnacles National Monument staff or tried and trusted volunteer veterans. Introducing college students to the volunteer program would be mutually beneficial to the monument and to the students. Students would get

valuable experience and could eventually become future raptor monitors for the monument. If we could increase that number to 2-3 volunteers that each come out 1-2 days each week, then the interval between observations could remain low and the employee would still have days to spend on other projects. Volunteers have traditionally caused more work than they save. It is very difficult to train a volunteer to take accurate notes and learn to make quality observations. The quality of notes and observations may be lower with increased numbers of volunteers.

5. A combination of all or some of the above.

The proposed ways of altering the monitoring program should "free" the seasonal employee to assist in other projects related to resource management. We would meet the goals of maintaining the minimum amount of information to keep the raptors protected and could begin to address other wildlife-related concerns. It must be recognized that the level of accuracy of the observations will decrease. Currently we have week intervals for beginning incubation and hatching. We have 3-4 day intervals for fledglings, accurate chick counts and aging. With decrease observations either by decreasing the seasons or by increasing the interval between observations, incubation and hatching will be recorded as before "x" date, fledging will be recorded as after "x" date and chick counts and ages may not be as accurate. Additionally, if a nest fails, we will not know when it happened and will have fewer opportunities for salvaging.

A possible negative effect of changing monitoring protocol is that monitors spend extensive time out in the field. As is depicted by our visitor contacts, our presence on trail is important, especially in congested areas on weekends. If reducing raptor monitoring is warranted, we will need to assess the impacts of not having resource staff (1) watching for climbers and hikers in sensitive zones and (2) providing mini-interpretation talks. Contact with the public has been important to the success this program. As a resource team, we will need to determine what kind of information we want and that the information levels are sufficient to manage the population.

HUMAN RELATED ACTIVITIES

During the season, we noted five incidents of visitor activity in sensitive areas. Disturbance is less from previous years. These five incidents were entirely attributed to

off-trail hikers. Though a pair of climbers where stopped in the Scout Peak area while on a trail under advisement, hiking toward a Goat Rock which was also under advisement. Most territories were undisturbed throughout the entire breeding season. Areas without printed advisories like Willow Springs and North Chalone were also left undisturbed. All people contacted who were in sensitive areas were apologetic, and claimed ignorance of the advisories. Overall, visitors seem supportive of the program, and compliance was good. This should be attributed to our visitor education programs including signs on trail and mailing advisories to popular hiking and climbing stores. Table 1 shows the breakdown of the five observed occurrences of visitors in sensitive areas. The numbers do not indicate total people present, but rather total number of occurrences.

TABLE 2: Visitors in Sensitive Areas

LOCATION	HIKERS	CLIMBERS
Scout Peak Area	3	0
Balconies	2	0

This year signs indicating sensitive areas were posted at Scout Peak (1 sign), Hawkin's (1 sign) and Little Pinnacles (1 signs), and Balconies (Smiling Simian, 1 sign and Tilting Terrace, 1 sign.

I believe the large reduction in non-compliance with the advisories at Balconies to be a direct affect of the sign placed at Smiling Simian. Visitors continue to ignore of the Scout Peak sensitive area sign. This may be due to only one sign being placed instead of two signs, as has been done in the past. With increased visitation and a subsequent increase in off-trail hiking, the continuation of sign placement is imperative to protect nesting areas. We may need to place more flagging along at the beginning of the Scout Peak sensitive area as well as wording the sign with stronger language. Next year I would advise that two signs and more flagging be placed at the beginning of the Scout Peak sensitive area.

In addition to visitor disturbance, we had a minimum of 20 low flying aircraft (planes and helicopters combined) in the park. Several of these flew within 100 feet of the rock formations. For the first several years of raptor monitoring, over-flight seemed stable around 5-7 incidents. In 1995 it increased to 15, then jumped up to 42 in 1996.

This year fly over airplanes and helicopters have decreased, by average. The legal ceiling over the monument is 500' Above Ground Level (AGL). Whether a plane is above or below this measurement is an estimate of the observer. Attempts to cite violating aircraft have failed repeatedly. The case often comes down to the word of the pilot against the word of the observer. Therefore 500 feet AGL is exceedingly difficult to quantify and to prove. In addition, only a small fraction of the violating aircraft is identifiable by their license numbers. The case being made that legal ramifications are hard to pin on violating aircraft. It is my suggestion to implore that the pilots regulate themselves. Advisories should be posted in area airports warning pilots of the ceiling.

Raptor Monitors had only a few contacts that were interpretative in nature (Table 2). We estimate contacting 30 visitors during the course of our collective fieldwork. Raptor monitors continue to be an important park presence in the field and on trails. Raptor monitors wear civilian cloths on the trail and blend in with other visitors. The lack of uniform has allowed raptor monitors to concentrate more on monitoring and less on visitor contacts. Visitor contacts usually consist of hikers and climbers who are curious about the raptor monitor's activities or the status of the breeding raptors within the park. In most cases a short, informal talk was given about the raptors of Pinnacles and the project itself. If a bird was present, we offered a viewing opportunity to the visitor. All reactions were very positive and supportive.

Table2: Showing visitor contacts and related information for the 2000 breeding season.

Date	Location	Duration (Min)	Topics	#People	Notes
19-Feb	Tilting Terrace	4	Project, Nest locations, climbing	2	Climbers
28-Feb	Old Pinn. Trail	10	PRFA's, trails, bird watching, caves	3	One person PRFA's other 2 caves and trails
28-Feb	Tilting Terrace	80	PRFA's of Balconies area	1	Same single person as above
11-Mar	W. side of Sponge	20	Raptors, PRFA project, Biology, Job hunting	1	Fellow biologist
12-Mar	Tilting Terrace	30	Peregrine release, PRFAs, park facts	2	Couple had property with release Peregrine
18-Mar	Pipsqueek Pinn.	30	Peregrine in Alaska, PRFAs, science projects	4	Person in group fellow raptor biologist
18-Mar	Pipsqueek Pinn.	30	PRFA program, interpretive talks	1	
18-	Pipsqueek	30	PRFA program,	3	German exchange

Mar	Pinn.		other birds in park		students
07-Apr	Highpeaks bench	30	PRFA and other park raptors	1	
08-Apr	Highpeaks bench	30	Advisories and PRFA program, climbing	2	Climbers in advisory area

Shelley Buranek and myself presented talks on the bird population within the park for National Migratory Bird Day. The talks were given in Salinas and in Hollister. Though the audiences were very receptive to the information provided in the talks, both locations yielded a disappointing number of interested parties. I would recommend additional press release material be sent earlier, and possibly doing an in-class project with some schools near the park. This community out-reach is a positive experience for the observer as well as a great opportunity for disseminating information about conserving park resources.

It has been my experience that climbers are willing to follow voluntary closures if they know about them. Developing new methods of conveying vital information is important to the ongoing success of the program. I recommend the following: a new bulletin board located at the beginning of the Condor Gulch Trail to be used for advisory display. A new bulletin board at the junction of Balconies Cliffs/Caves to indicate no climbing on the North side of the trail: a pamphlet holder at each bulletin board with current advisories for distribution. **Pamphlet holders are necessary at the bulletin boards because many climbers start climbing before the entrance booth or visitor center is open.**

There is the question of how to keep off-trail hikers informed of sensitive areas. Very few of park visitors check-in with rangers before they start exploring. It is doubtful that any information is reaching these hikers since our push to inform has been directed towards the climbing community. I am not exactly sure how to inform hikers of sensitive areas, but **a solution must be found.**

Recommendations regarding the additional bulletin board, handout boxes, and concerns of reaching the off-trail hikers have been repeatedly suggested since 1993. At this time, NO ACTION has been taken on them. There needs to be a bulletin board located at the trailhead of every trail in the monument. This would guarantee that every park visitor has had the opportunity to inform themselves of relevant matters pertaining to their enjoyment of the monument. Hopefully, we will be able to take action in FY 2001.

SUMMARY

It was a successful year for prairie falcons and American kestrels in the monument. Red-tailed hawks and great-horned owls seemed to have strong numbers inside the monument, even though no nests were found. For golden eagles, the year was a failure. However, there were immature golden eagles seen outside of the park, so at least some eagle reproduction occurred in the local area.

ACKNOWLEDGEMENTS

I would like to thank all employees who reported raptor observation and turned in wildlife cards. Special thanks goes to Paul Johnson for turning in the most observation cards, and to the ranger staff for all their observations throughout the year.